

Stories That No One Has Asked For

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I don't have lots of thoughts, but the few that I do have are nagging and persistent. Writing and drawing stories about science is solitary work, and I spend a lot of time with these thoughts. Unfortunately, the reason they are nagging and persistent is because I haven't come up with too many satisfying answers. One concern that plagues me as I sit at my drawing board is best summarized in an excerpt from a Japanese comic called *NonNonBa*, by Shigeru Mizuki, originally published in 1977.

NonNonBa is a semi-autobiographical story about Mizuki's childhood. As a kid, he was very interested in Japanese monsters called *yokai*. He wrote and drew *yokai* stories for his friends and as an adult he became the king of *yokai* genre comics. In *NonNonBa*, Mizuki's grandmother tells him stories of various *yokai* with whom Mizuki eventually interacts. In one such interaction, he is talking to a *yokai* whose primary purpose in existence is to throw beans around and scare people.

"Why do you throw azuki beans?" asks Mizuki.

The *yokai* responds, "Even I do not know that," but in the course of the discussion the *yokai* eventually throws the question right back at Shigeru: "Why do you draw stories that no one has asked for? It is the same thing."¹

This is the nebulous question wafting through my head as I sit at my drawing board, sometimes late at night or early in the morning, sometimes listening to music or watching a soccer game on my phone. I'm hunkered over and my back hurts. I'm forty-eight years old and I'm drawing comics that nobody has asked me for.

For Mizuki, the answer to the question is fate. He invokes a mystical explanation for his cartooning: "It is what I was meant to do."²

But I don't believe in fate. So I ask myself, "Okay, self, if it's not fate, what is it?"

"Because it's interesting?" I reply.

"Not a very gratifying answer," self replies.

Interesting is important, but is that the sole reason that I make science comics? And, is what I'm doing trivial? Maybe this isn't a fair question, but to provide context, let me tell you about a fellow biology graduate from DePauw University. When I was on my first sabbatical as a visiting professor at

DePauw, this colleague was back on campus for an event called DePauw Discourses, and I interviewed him on stage. We both graduated in 1989 and he's a big deal. He is saving turtles. He has written and co-directed a *NOVA* special about turtles. He has helped indigenous people along the coast of Mexico make major economic shifts in how they live their lives so they don't harvest the eggs. He is stunningly good-looking, does some professional modeling, and, not surprisingly, has a lovely family. So, here I have this colleague, and he is saving people, and turtles, and capitalism. Now, I'm a very competitive person, but I could always say to myself, "I've got my books. I've got my books." And, of course, last year he wrote a *New York Times* best-selling book about saving the ocean, so now I've got nothin'.³

What is this thing that I'm doing? Does it matter? Will it have any lasting importance? Why do I write stories no one has asked for?

BIRTH OF A NOTION

As a trained empiricist, I'm going to use the artifacts and experience from creating *Last of the Sandwalkers* to dig into the question, Why do I write stories that no one has asked for?⁴ To do so, I will go back in time, sift through the fossils of my work, and ask several smaller questions. *Last of the Sandwalkers* is the story of a group of beetle scientists exploring the world. This is the first drawing of the beetles that essentially inspired the book (Figure 1). It was done in 2004 at the Small Press Expo.



Figure 1. The first drawing of the beetles who became the characters in *Last of the Sandwalkers*.

WHY DID I DRAW THIS?

I drew these beetles because my son Max was sitting on my lap and the Small Press Expo can be crushingly depressing when no one comes and buys your books. At the time I was selling *Clan Apis*, the biography of a honeybee, and *The Sandwalk Adventures*, which is about Darwin and a conversation he has with two follicle mites.⁵ Both had gotten great reviews, but at that point in the show, business was slow and Max was restless. I didn't want him to go anywhere, so I started drawing silly beetles doing silly things. He liked them so much, he signed right in the middle of the image. His first attempt to take credit for something I did. This is where the beetles in *Last of the Sandwalkers* came from, and they inspired me. Beetles are so diverse in terms of their bizarre abilities that they're almost like a pantheon of superheroes. Given how much they entertained Max, I decided they should be the focus of my next book.

WHY DID I DRAW IT THIS WAY?

Despite the slow spell when I drew the first beetles for Max, the 2004 Small Press Expo (SPX) was actually a great show for us. We were selling a bunch of books and I was feeling the buzz. It's exciting when we're making sales and I'm thinking, "Oh man, this is great! I'm signing books, I'm doing all these sketches, people love me. I've got to make another book!" That thought flowed naturally into the next. "Beetles! It will be about beetles! And, instead of the laborious, detailed artwork that I tend to do, I'm going super-simple." Hyper-simplified cartooning was in vogue, so I thought I would give it a shot. Here is a representative page from that initial stab (Figure 2).

At first, I was very excited because I could draw the pages very fast. But after seven or eight pages, I could not escape the fact that I absolutely hated it.

WHY DID I CHANGE THE WAY I DREW IT?

There were a couple reasons why this simple approach wasn't right. There are actually four different beetle characters on this page, but I realized very quickly it was often difficult to tell one from the other. In addition, this simplified style sucked all of the real world wonder out of the book. Gone were the fun little details about insects that made them cool and challenging to draw. I had, at this very early stage, simplified them so much that I had removed the joyful exploration of their natural history. So I decided to change the style a little bit.

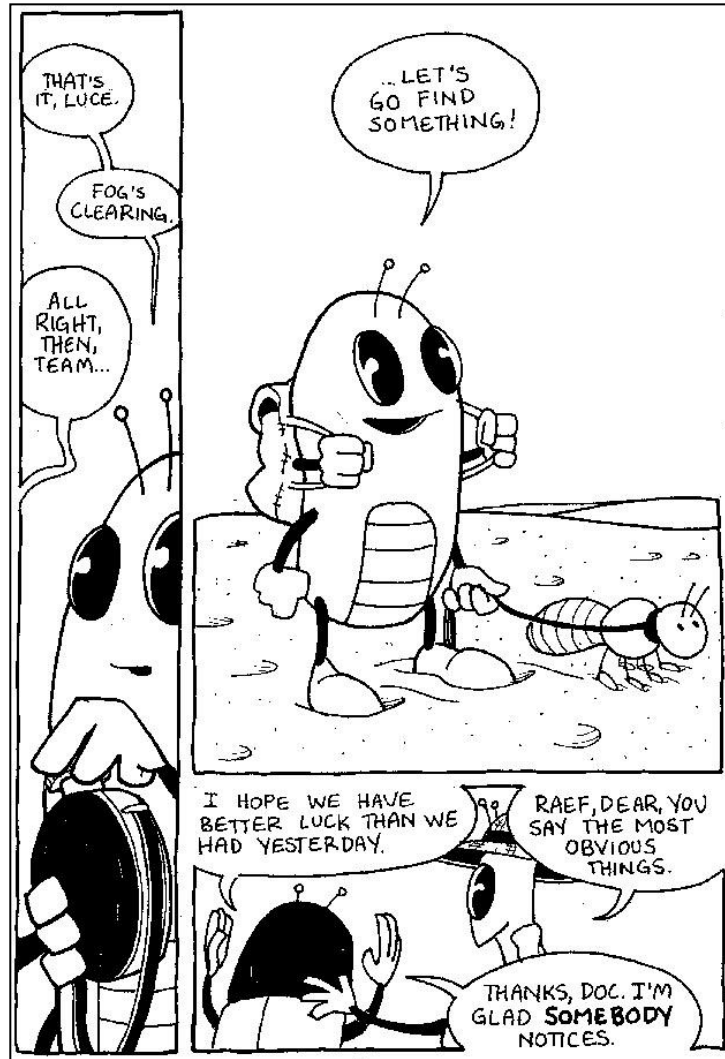


Figure 2. An early attempt at drawing beetles in a simplified style.

This next image captures what I am trying to do with my science comics (Figure 3). It allows the reader a glimpse of the wondrous world underfoot. The natural shapes of the plants, moss, pebbles, and especially the beetle are the things that I am interested in drawing. The detail, the diversity, and the bizarreness are what make this world beautiful to me, and it is the feeling I want to share. The simplified version extracts all of that wonder and weirdness and replaces it with something somewhat familiar and ultimately boring.



Figure 3. A later image in a more detailed style.

WHY BEETLES AND WHY THIS STORY?

Last of the Sandwalkers is about family. At some level it is about my family. It started at a comics show with Max on my lap; my wife, Lisa, sitting beside me; and my younger son, Jack, crawling under the table. I love being part of a family and, even better, I love the family that I'm a part of. Those are the

feelings that run under everything that I write. However, as a family of introverts, we're a pretty private group, so it's best if readers don't know I'm writing about my family. To avoid this, I cleverly made us all beetles and switched around some of personality traits and — BAM — suddenly I had a vehicle to write about those feelings.

Why beetles? Insects in general, and beetles in particular, offer me a lot of opportunities to talk about science in a personal way. The adventure opens with these beetles waking up in the desert after they've been in this thing called chill-coma. All bugs do this: if you cool them down enough they topple over and slip into chill-coma. Warm them up and they pop back up. It's a pretty remarkable ability. The physiological underpinnings of chill-coma were the focus of my graduate research, so why not start this odyssey with the first real science I did?

Beetles offer tremendous storytelling possibilities. Given their incredible diversity, it is easy enough to find a beetle that does just about anything you need for the story. You want a beetle that can detect ultrasound? Easy-peasy. Want a beetle that can spray steaming hot—I mean, steaming hot—chemicals out of its butt? Done. The bombardier beetle sprays a noxious liquid so hot that it must rapidly open and close the jet while spraying. If it sprays continuously, it will cook its own butt.

This is the world you live in. And that is why I want to share it.

WHY DO I TELL STORIES THE WAY I DO?

A science librarian who reviewed one of my books said he didn't know much about science graphic novels, but to him there seemed to be two types. There are those that take a boring, stilted, text-heavy textbook and convert it into a boring, stilted, text- and image-heavy comic book. And then there are others that are trying to use the comics medium to communicate science in a different way. I want to be in the second category. I want to do something that's different, something that gives you a sense of the world. But how do you experience wonder, how do you experience joy if there isn't a human component in it? I can read a textbook and get positively giddy about photosynthesis because I'm already plugged into that world. But if you're not, how do I get you there? The only way you get into someone's head is through his or her heart, and the only way you get to the heart is with stories.

At the 2015 Small Press Expo, I had two young ladies, age twenty-three or twenty-four, come up to me, and they just stood there.

“Hey, how you guys doing?” I asked.

“We're great,” said one, “Our dad read *Clan Apis* to us out loud when we were little!”

It was really kind of moving, because one of them started to get a little red in the eyes and said, “I cried when Nyuki died.”

She was already tearing up. This was remarkable and touching for me. It's always profoundly satisfying when something you have created moves someone emotionally. But even more important to me as a science comics writer was the fact that she cried when a cartoon insect died. Here is a creature that most people fear and swat without thought, but she had connected to a bee in a personal way. The teacher in me was also delighted when they proceeded to tell me all this stuff about bee biology. It just came tumbling out. How could a story read to them years ago create such a lasting impression of the characters and the science? I think it is because it made them laugh and it made them cry. They felt something. There was a story to provide scaffolding for the science and the natural history.

I believe telling fictional stories to explain and explore natural history is a powerful way to engage young readers about the natural world. The significance of this approach was explained to me by a librarian who specializes in young adult literature. She told me that a good story should act as a mirror and a window. The mirror reflects something that the person reading it can relate to. If the story is all sci-fi, with tentacle monsters speaking a funky Elven language, you might have more trouble reaching readers than if you tell a story about bees that includes the fact that they're all sisters, they're a family, they have to live with living, and they have to live with dying. Even in non-anthropomorphic, real-life bees, there's conflict. There are different agendas based on parentage. There are internal conflicts that readers can relate to.

The window is the glimpse of another world. In *Clan Apis*, the reader is immersed in a world in which organisms build their houses out of the wax they excrete from their abdomens. Think about that. You get married, decide to settle down, and start working on your house. Imagine that you start digging around in your ear to get building materials. That's weird, right? It's weird, but it's amazing! If you've ever seen a honeycomb, it is this phenomenal bit of architecture. And the weird doesn't stop there. These are organisms, for example, that see ultraviolet (UV) radiation. There are UV markings in the world that we can't see, on flowers and birds and reptiles and all sorts of critters. These animals are having visual conversations that we have no idea about, exchanging information invisible to us. Unknown worlds, right here on your planet.

WHY A PUBLISHER?

Writing *Last of the Sandwalkers* was an epic quest. On the way back from SPX in 2004 when I drew that sketch, I first told Lisa, "This is the story I'm going to do."

She said, "Tell me what happens." I told her, and she wrote a number on a piece of paper and put it in the glove compartment of our little Honda Civic.

I said, "What's that?"

She said, "That's a page number."

I said, “No, it’s going to be 160 pages. And it’s going to be done in two years.”

She said, “Okay.”

The number she wrote was 300. And she keeps reminding me of that. It turned out to be 320 pages, but technically it was only 300 pages of art, and 20 pages of annotations, which still counts as, well...she was still right. This is something I’ve obviously been working on for a very, very long time.

Up until this point, I’ve self published my books. There are a couple of reasons for this. First, when I started in 1998 there was no one – and I mean no one – interested in publishing a comic about honey bees. The second reason for self-publishing was that I really, really hate being told what to do. I tend to avoid it. So why would I go with a publisher? Because despite the good reviews and awards my books have received, I wanted to reach more readers, and a publisher can do things that I can’t do. They have a marketing department, for starters. They can arrange talks, they can put ads in various venues, they edit for you, they give you feedback, they can connect you to a cover artist, they can do a whole bunch of other stuff. And, for a while, they can work independently to promote the book after it has been published. I’ve been doing this on my own, and I’ve been getting pretty good press. This is the bragging part, but my work has been featured on NPR and in the *New York Times*. I’m thinking, “Okay, go with a publisher, coming-out party. Debutante of the ball, that’s right, I’m back! And now I’m big, woohoo!” That’s what I thought would happen. It didn’t quite work out like that.

The editing of a graphic novel is a very interesting experience. While I have had friends copy edit my previous books, no one has ever told me, “Change the art.” My friends had told me that I spelled something wrong, and I didn’t use “whose” correctly, and it’s “it’s,” not “its,” and I meant “from” but just said “form,” but never had anyone said, “You know, this panel is confusing.” Apparently, several of my panels were confusing for a first-time reader. We got galleys of the entire book and the editor just went through it. She would write comments, and she’d say, “I don’t get what’s going on there.” Most of the time these were good changes, but there were a few times that I disagreed. Ultimately I want people to have a seamless reading experience, so I valued her input, and as much as I groused about having to make changes, my editor absolutely made the book better.

The process of editing ultimately taught me a lot about the wonders of computer manipulation. I could redraw entire panels, scan them in, and plunk them into the new page. This came in handy when I learned that “O.K.” is not house style. The publisher prefers “okay.” When I set about fixing this, I was astonished by how many times I wrote “O.K.” in the text. Sheesh. So I digitally erased the “O.K.”s and pasted in an “okay” that I had scanned in. This one “okay” is all throughout the book. Every single “okay” in the book is identical.

I also learned how to disagree in an agreeable fashion. There were times when I felt changes were unnecessary. For instance, my editor was concerned that the beetles all looked the same and that we

needed to say their names more frequently to clarify it for readers. She went through and circled what seemed like a gazillion different places where we could stick a name in.

I said to her, “Okay, but the text is going to read like this:

‘Hey, Lucy, how are you?’

‘I’m fine, Raef, how are you?’

‘I’m good, Lucy.’

‘What are we going to do today, Raef?’

‘I don’t know, Lucy.’”

I said, “That’s really bad.” She said, “Oh, I know, it’s a balancing act, so could you just put it in a few places?”

This was pretty tedious. I had to make the names and then go through and try to make the fixes. I made as many as I could without tipping into unreadability. I confess that it stung a little bit since I had worked so hard to make the characters visually distinct. One of the things I’ve noticed in the few times I’ve worked with editors is that the assumption is that kids are as dumb as we are. We always forget that they have more neurons than us. We are the ones who have been slowly winnowing our neurons down by the millions over a long time. So, if there’s a group of individuals that can look at a bunch of beetles and say, “Oh, no, that’s Professor Bombardier.” “Why?” “Well, she has a hat, and, you know, she’s got a little bow, and she’s cute, and she’s kind of whitish,” surely it is children.

Kids can distinguish hundreds of Pokemon, dinosaurs, kinds of cars, and characters from dozens of different types of stories. They can remember five beetles wearing different hats.

HOW DO I REACH PEOPLE?

Prior to the book’s release in April, the publisher started to promote it. As an avowed introvert, I’m not always the best person to be out there on the front lines of marketing. The publisher had a couple of approaches, and the main one, especially leading up to and during the release, was to do a blog tour. I thought, “Great! Blog tour. They’re going to send it to people with blogs, people will read it, and then they will promote it. Awesome! I’ll sit back and just watch the twenty-dollar bills roll on in.”

They said, “Yes, we have lined up lots of blogs for you.”

I said, “Oh, well that’s great.”

“Here’s what we need you to do, Jay: For those fourteen blogs, all we need you to do is generate an original illustration. And then a five-paragraph essay about that beetle’s species.”

“Oh, okay! Um, I’ll try.”

It turns out there are exactly fourteen distinct beetles species in the book. I sat down and I wrote an essay for each, and they were on the blogs, and everyone seemed to like the book. But what was really interesting for me (and a little concerning) was some of the comments.

“Ooh, I don’t like to read about bugs.”

“Ooh, sounds interesting but they give me the creeps.”

I thought, “Oh, my God. What is happening? No, no, no, no, no! They’re not real. It’s just paper. They can’t leap off the page and get you!”

The blog tour was a fair bit of work. It was three weeks’ worth of work that I did not know was coming. And then I started tweeting, which is as self-promotional as things get. Then they made me go places. They arranged for me to go to schools and libraries and I had to interact with people. Actually, the truth is this was a lot of fun. I went to libraries and several events in Baltimore and Washington, D.C. I saw a lot of disparity between inner city D.C. and suburban Baltimore. But in both places they were excited to have someone visit, even a pear-shaped, goofy professor person. They were totally into it. Why do I go places? Because the kids are into it in a way that nobody else is, and that’s ultimately what I want. I want kids to read the book. My visit to the bookstore Politics and Prose, in D.C., stimulated me to create a new way of doing comics in public.

They said, “We’d like you to do a reading.”

“What? You can’t read comics out loud and have it mean anything.”

“Well, we’d really like you to read it.”

“Oh, okay. How am I going to do that?”

Here’s what I came up with. I printed off several pages from the book and made four copies. It was a sequence that featured all four of the main characters and each had a significant speaking part. I made these copies into little scripts, and then I said, “Okay, this is the Raef script.” Every time Raef spoke, I’d go in and highlight Raef’s words in blue. On Lucy’s script, I highlighted just Lucy’s, and so forth. And then I took four kids from the group and they gave a dramatic reading and everybody else did the sound effects. For this part, I projected the pages and then conducted the group with the sound effects. Everyone could follow along. I had kids making “bam,” “snap,” and all sorts of sound effects, and the truth is, I was amazed at how well this worked. They really got into it and participated.

WHY DO I WORRY ABOUT REVIEWS?

One of the ways publishers drum up interest in a book is to send out PDFs through a service called NetGalley. People who do reviews for Goodreads and other places like that can access the PDFs and review the book. The third review I read was by a poster calling herself The Armchair Librarian. Her final assessment of my magnum opus? “I think that actually sums up my beef with this book. It is very

confusing. The world-building was not so good, and some panels were very text heavy, to the point where reading along the panels no longer flowed. It took *effort*.” I love how she italicized “effort.” She continues. “Graphic novels—good ones, anyway—should not be an effort to read. The text and the panels should be balanced and support one another. Not bog one another down. Ordinarily, I’d probably slog my way through this”—this is the part I like—“but my e-reader is getting pretty overrun and I have some hard copy ARCs [advance reading copies] and borrowed books I need to finish, and on top of that I’m also job-hunting, so I don’t really have time or energy for books I don’t like.” Did not finish, one star.⁶

Now, as a person who gives five-point quizzes every day, one star is an F! Two is an F, three is a D. I was devastated by this. Now, the first two reviews I read were both five stars, but who cares about that? This one was negative! I got sort of obsessed and started to periodically (and by periodically, I mean about once an hour) type *Last of the Sandwalkers* into Google to see what popped up. I was also searching for images of the cover to see what sites were featuring it. In the course of doing this, I noticed that there was another image that kept popping up in conjunction with mine: the cover for a book called *Billion Dollar Milkmaid*. My first thought was, where on Earth would a book about beetles for kids also appear with *Billion Dollar Milkmaid*? Turns out, both were reviewed by The Armchair Librarian. “I feel like there’s actually a story in this.”⁷ This is the first line in her review of *Billion Dollar Milkmaid*! The book is eleven pages long. It is referred to as “lactation porn.” It is apparently replete with typos. Her rating? One to 1.5 stars. If you average that, it is more than my book got! Crushing.

But then other reviews started coming in. She says the world-building’s not so good, but *Booklist* says it rivals Tolkien. The *New York Times* says, “You can’t squash science,” BoingBoing says it “masterfully combines storytelling and science,” and *Kirkus* says that my sincere excitement makes the bugs memorable.⁸

With reviews like that, sales must be pretty good, huh? How many copies did we sell? Five thousand. Which is not great, frankly. It’s okay, but it’s not great. And the truth is that when the editor sent me the number, she said, “Well, I know it’s disappointing, and we want to work together again despite this inauspicious beginning.”

I thought, “Oh, my God, eleven years of my life! Gone!”

WHY DO I TELL STORIES THAT NO ONE HAS ASKED FOR?

Last of the Sandwalkers is the best thing I think I’ve ever done. I say that without qualification. The best thing I’ve ever done. The most personal thing I’ve ever done. And the very thing I feared most has sort of kind of happened. Critical success, but commercial—meh. But, in the fullness of time, I’ve become sort of Zen about it. Five thousand readers. I teach two hundred kids a year. Five thousand readers is twenty-five years’ worth of students. That’s twenty-five years’ worth of minds that I got to

touch, even briefly. And my books are always slow burns. Very slow burns. They'll get into libraries, kids will buy them, and I'm not really all that worried.

So, why do I draw stories that no one has asked for? Science and art are both active ways to discover. All the pages in my book started blank. They did not exist. They were unknown. And, like my studies with chill-coma and bees, when I discovered something, I was the first to see it. I was the first, nobody else. When a page was done, I saw it first. When Lucy saves the day by using an ant to spread its pheromones on the arms of her father so he's not consumed, I saw that first. I discovered it. Why do I do this? Because drawing science comics gives me the same rush of creation and discovery that comes with doing science. And that is a feeling I want to share.

NOTES

1. Shigeru Mizuki, *NonNonBa*, trans. Jocelyne Allen (Montreal: Drawn and Quarterly, 2012), p. 141.
2. *Ibid.*, p. 142.
3. Wallace J. Nichols, *Blue Mind: The Surprising Science That Shows How Being Near, In, On, or Under Water Can Make You Happier, Healthier, More Connected, and Better at What You Do*, (New York: Little, Brown, 2014).
4. Jay Hosler, *Last of the Sandwalkers* (New York: First Second, 2015).
5. Jay Hosler, *Clan Apis* (Columbus, OH: Active Synapse, 2000); Jay Hosler, *The Sandwalk Adventures* (Columbus, OH: Active Synapse, 2003).
6. Nenia Campbell's Goodreads bookshelf, <https://www.goodreads.com/review/list/2190064-nenia-campbell>, accessed September 2015. Ms. Campbell deleted all of her old book reviews on March 25, 2016, so the reviews mentioned here are no longer available. See https://www.goodreads.com/user_status/show/92204553.
7. *Ibid.*
8. Jesse Karp, "Last of the Sandwalkers," *Booklist*, March 1, 2015; Maria Russo, "Bookshelf: Creepy-Crawlies," *The New York Times*, April 10, 2015; "The Ineffable Joy of Transforming Boring Scientific Explanations into Exciting Comics," BoingBoing.net, September 4, 2014, <http://boingboing.net/2014/09/04/the-ineffable-joy-transforming.html>; "Last of the Sandwalkers," *Kirkus Reviews*, February 15, 2015, <https://www.kirkusreviews.com/book-reviews/jay-hosler/last-of-the-sandwalkers/>.